

POWERLINES

A Newsletter from Intermountain Power Agency



February 2021

Ted Olson: 1949–2021

Ted Olson, longtime chairman of the Intermountain Power Agency Board of Directors, passed away unexpectedly January 23, 2021, at the age of 71. He was first elected to the IPA Board in 1989. Ted served on the Ephraim City Power Board for more than 40 years and was active in other public power organizations, including Utah Associated Municipal Power Systems and the Intermountain Consumer Power Association. In June 2019, he received the American Public Power Association's Spence Vanderlinden Public Official Award, which recognizes elected or appointed local officials for their contributions to public power.

Born in Mesa, Arizona, Ted moved with his parents frequently in his early years, living in Arizona, New Mexico, and Utah. Much of his time was spent in ranger stations in Manti, Monticello, and Ephraim, where he developed a great appreciation for the outdoors by working with his father.

Ted graduated from Manti High School in 1967 and Snow College in 1969, after which he served a mission for The Church of Jesus Christ of



Latter-day Saints in Taiwan. In 1972, he married Vickie Reid in the Manti Temple and lived in Salt Lake City until completing his education at the University of Utah. In 1976 he graduated Magna Cum Laude with a Master of Science Degree in Geophysics. He then accepted a position as a member of the faculty at Snow College, where he taught mathematics and physics for 42 years before retiring in 2017.

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Ted Olson: 1949–2021 *continued*

In addition to serving on the Ephraim City Power Board, Ted also represented local communities on the boards of multiple other public power organizations (ICPA, IPA, and UAMPS), where he was elected to multiple terms as Board Chairman. Among his many passions and interests were seismology, church service, music, and riding ATVs with the “Professor Posse.” Ted also provided local weather information with

colorful commentary each morning on radio station KMTI. He dedicated much of his life to the service of others in many capacities—as Scout Master, Elders Quorum President, Bishop, Stake President, and Mormon Miracle Pageant Presidency.

Ted is survived by his wife, Vickie, 6 children, and 22 grandchildren.

IPP Renewed Update

IPP Renewed

IPP Renewed continues on a schedule that will allow for the replacement of the Project’s existing coal units with two natural gas combined-cycle power generation trains totaling 840 MW by 2025. IPA signed a contract with Mitsubishi Power Americas in February 2020 for the supply of the units, which are currently in the detailed design stage. An Engineering, Procurement, and Construction (EPC) contractor will be selected this year and begin construction activities in Q2 2022. The new generating units will commence service in May 2025. Mitsubishi has committed to performance requirements that will allow the units to operate on 30 percent hydrogen upon startup in 2025, reaching 100 percent hydrogen fuel by 2045.

IPA advertised a “multi-stage” Request for Proposals in June 2020 for the supply and storage of green hydrogen fuel, and stage 1 responses have been received and evaluated. Stage 2, scheduled to be advertised in June 2021, will involve a deeper dive into the required technical and commercial arrangements, including identifying renewable energy resources, transportation and storage, and needed commercial structures. The anticipated award of the hydrogen supply project is December 2022.

Project Updates on IPA Website

IPA maintains a webpage that provides more information about IPP Renewed, including text and video describing the project background, the facilities to be constructed, the use of renewable energy to produce green hydrogen, and above- and below-ground technologies that will be utilized. The page also features a project schedule that is continually updated as project tasks are completed. To learn more, please visit ipautah.com/ipp-renewed.

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IPP Renewed Update *continued*

Upgrades to existing facilities will be undertaken to provide the dispatchable energy required to maintain reliability and support HVDC transmission. These include both the construction of new converter stations and the expansion of AC switchyards at Intermountain and Adelanto,

as well as the installation of reactive power equipment at Intermountain. Construction of these facilities will be carried out in stages, beginning with the expansion of the Adelanto AC switchyard in May 2021. All upgrades are to be completed by July 2027.

IPA 2020 in Review

IPA has published a series of videos highlighting its financial and operating performance for the fiscal year ending June 30, 2020, as well as its history, governance, and Board of Directors. Click on the links below to view each video:

- [Operating Report](#)
- [Financial Report](#)
- [History and Governance Overview](#)
- [Meet Your Board Directors](#)

Officer and Director Elections

Allen Johnson (City of Bountiful) and Eric Larsen (Fillmore City, Town of Holden, Kanosh, and Town of Meadow) were re-elected to four-year terms on the IPA Board at the annual meeting in December. Board officers elected in January were Blaine Haacke (Murray City), Chair; Nick Tatton (Price City), Vice Chair; Eric Larsen (Fillmore City, Town of Holden, Kanosh, and Town of Meadow), Secretary; and Allen Johnson (City of Bountiful), Treasurer.

Financial and Operating Highlights

A detailed accounting of IPA's performance in 2020 is available in the Annual Report, which can be viewed or downloaded from the [IPA website](#). Highlights from the Financial and Operating Summary are shown on the next page.



Eric Larsen



Allen Johnson

IPA 2020 in Review *continued*

Investment Performance

Average invested assets	\$185,207,257
Realized investment portfolio earnings	\$3,564,020
Rate of return	1.919%

Operating Summary

	2020	2019	2018	2017	2016
Gross generation (gWh)	7,367	9,347	8,743	8,767	10,743
Equivalent availability	94.9%	92.0%	92.8%	90.9%	93.1%
Net capacity factor	43.0%	55.2%	51.5%	51.6%	63.4%
Heat rate (BTU/kWh)	10,377	9,870	10,002	9,716	9,767

IPA News Bites

- IPA has teamed with Siemens Energy to perform a conceptual design study on integrating a hydrogen energy storage system into an advanced-class combined-cycle power plant. The project has been awarded a \$200,000 grant from the U.S. Department of Energy.

The goal of the study, which will begin in March at the IPP, is to analyze how to maximize the overall efficiency and reliability of a CO₂-free power supply. It will address the challenges involved with large-scale production

and storage of hydrogen and analyze aspects of integrating the system into an existing power plant and transmission grid, such as the interaction with subsystems, sizing, and costs.

“By switching from coal to a mixture of natural gas and hydrogen, we can reduce carbon emissions by more than 75%,” said IPA General Manager Dan Eldredge. “This study will help pave the way for the successful transition to net-zero carbon power generation.”

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IPA News Bites *continued*

- Moody's Investors Service completed a [periodic review](#) of IPA's bond ratings and announced no changes.
 - IPP Renewed featured prominently in numerous international publications for its green hydrogen efforts:
- [Utilities Look to Green Hydrogen to Cut Carbon Emissions](#) (Wall Street Journal)
- [Hydrogen Power Is Set To Take Off, If The Development Dollars Show Up](#) (Forbes)
- [Why NextEra's green hydrogen pilot is a big deal](#) (GreenBiz)

Green Hydrogen in the News

- [Australia Could Lead The \\$11 Trillion Hydrogen Boom](#) (Barchart)
- ['Ideal conditions': Canada to link huge green hydrogen plant to hydropower](#) (Recharge News)
- [Enel advances Chile's first green hydrogen project](#) (S&P Global)
- [China Will Get 'Green' Hydrogen from Siemens-Sourced System](#) (Power Magazine)
- [Denmark reveals its Green Hydrogen Hub to support its renewable energy transition](#) (Hydrogen Fuel News)

Energy Items of Interest

The U.S. Energy Information Administration's [Annual Energy Outlook](#) concluded that it will likely take years to return to 2019 levels of energy consumption and carbon dioxide emissions following the impact of COVID-19.

EIA reported that 2020 natural gas prices were the [lowest in decades](#), and wholesale electricity prices were generally [lower and less volatile](#) in 2020 than 2019.

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Energy Items of Interest *continued*

EIA forecasted that nuclear and coal plants will account for the majority of [generating capacity retirements](#) in 2021.

The U.S. Energy Association published videos of each presentation from its 17th Annual [State of the Energy Industry Forum](#).

EIA forecasted that renewables' (including hydro) share of U.S. electricity generation [will double by 2050](#) to 42 percent.



10653 South River Front Parkway, Suite 120
South Jordan, Utah 84095
801.938.1333

Learn more about Intermountain Power Agency, please visit: www.ipautah.com

PowerLines is a publication of Intermountain Power Agency. The Intermountain Power Project includes a two-unit coal-fueled generating station located near Delta, Utah, two transmission systems, a microwave communication system and a railcar service center, all built as a joint undertaking by 35 utilities in Utah and California.

Certain statements included in this communication constitute "forward-looking statements" within the meaning of the federal securities laws. Such statements are generally identifiable by the terminology used such as "anticipate," "plan," "envision," "become," "expect," "future," "potential," "continue" or other similar words and include statements regarding future operations of IPA. The achievement of certain results or other expectations contained in such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements described to be materially different from results, performance or achievements expressed or implied by such forward-looking statements. Such risks include the ability to design, permit, finance and construct natural gas facilities at IPP, the continued payment by power purchasers under the contracts pursuant to which they purchase such power, the ability of third parties unrelated to IPA to continue to develop power and industrial facilities in the immediate area and other risks, uncertainties and other factors discussed from time to time in filings made by IPA pursuant to its continuing disclosure obligations through the Municipal Securities Rulemaking Board's Electronic Municipal Market Access system ("EMMA"), currently located at <http://emma.msrb.org>. IPA does not undertake any obligation to correct or update any forward-looking statements whether as a result of changes in internal estimates or expectations, new information, subsequent events or circumstances or otherwise.

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IPAUtah.com »

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